

Sustainable Empowerment Model of Beef Cattle Business Farmers in the Dry Land Area of Kediri Regency

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Abstract:

The purpose of this study is to construct a sustainable empowerment model of beef cattle business farmer in the dry land area of Kediri Regency. The study was conducted in Kepung Subdistrict, Kediri Regency. The sampling method used was a survey method. This study uses a combined approach between quantitative analysis (mainstream) and qualitative analysis (non-mainstream). Data which were analyzed using Structural Equation Modeling (SEM) based on *warppls* version 5.0 with the *Matlab* (Matrix Laboratory) compiler. The results showed the construction of a sustainable empowerment model for beef cattle breeders on dry land in Kediri District can be formulated in a model; (model 1) the independent empowerment model of beef cattle breeders on dry land and (model 2) the empowerment model of the ability of Empowers with the equation.

Keywords —empowerment model, sustainable, beef cattle, dry land

I. INTRODUCTION

Awareness to continue to preserve the environment has given to a paradigm of sustainable development that places sustainability as an important foundation in the utilization of natural resources. In this sustainable development paradigm, an increase in the income of an area of Local Original Revenue (PAD) or economic benefits should not leave interests from the social and ecological aspects as well as empowerment aspects.

As an approach to sustainable development, the concept of the Blue-Green Economy is a new concept as a meeting point between the green and blue economy, which is expected to overcome the main problems of development namely environmental sustainability, energy crisis, economic value, and poverty (profit, people and planet) (Soemarno, 2012). The basic principle of Green economy is to prioritize environmental sustainability such as; low carbon; saving natural

resources; not rely on fossil fuels; and waste minimization (United National Environment Program {UNEP}), (2012), while Blue Economy places more emphasis on; effectiveness, efficiency, innovative, adaptive, creative, social inclusion and zero waste (Paulli, 2010), as well as providing an economic multiplier effect (Harsuko R, 2013). According to Sutardjo (2012), the principle of a blue economy does not conflict with the principle of a green economy, but is complementary and integrated.

The application of the concept of economic empowerment according to Newstorm and Davis (1997), is more focused on efforts to empower the community by giving greater authority as the main actor in every decision making. The granting of greater decision-making authority to the community will encourage empowerment efforts as strengthening the ability of the community (empowerment) to empower their self (Mubyarto, 1994). Community empowerment basically places the community as the main actor to have more

power towards a prosperous society. According to Subejo and Supriyanto (2004), Empowerment is a deliberate effort to facilitate the community in planning, deciding, and managing local resources that are owned through joint work and networks so that the main purpose of empowerment is more to provide and improve the ability and independence of the community economically, ecologically and socio-cultural.

Most Indonesian farmers are traditional farmers whose income level is low, because the production that produced by these farmers is low. The low production is due to the scale of farming and the owned capital is very small, the technology used is still simple and equipment for agriculture is limited. Because of low income, the farmer is unable to save and make additional investments. Because there is no additional investment, the technology and equipment used remain simple and do not progress so that the production and income derived remain low. The low income of farmers is also due to the farmers being unable to use their family's power effectively and efficiently.

The concept of community empowerment arises because of the failure as well as hope. The failure in question is the failure of economic development models in tackling the problem of poverty and the environment that is sustainable. While hope, arises because of development alternatives that incorporate democratic values, gender equality, and adequate economic growth. Community empowerment is an effort to increase the dignity and level of the people who in the present condition are unable to escape the pitfalls of poverty and oppression. In other words, empowerment is enabling and empowering the community.

As these sustainable empowerment steps, a concept of sustainable empowerment of beef cattle breeders is needed to be able to optimize the potential that exists in the community in Kediri Regency in an integrated and sustainable manner. One alternative that can be implemented is to apply the concept of Blue and Green Economy synergistically by considering the potential of

existing resources in Kediri Regency. The synergy of these resources can be done by developing the Integrated Agricultural Area Community Empowerment Model (*KaPeT*).

Empowerment here does not only include strengthening individuals as a breeder, but also planting, renewing and integrating value systems such as; honesty, willingness, sincerity, hard work, thrifty, openness and responsibility in carrying out development activities which are an important part of the empowerment process. Sustainable empowerment in this case is the empowerment of farmers who play a role in the development of beef cattle business, especially in beef cattle farm management. So that researchers want to conduct research on the model of sustainable empowerment of farmers in the beef cattle business in the dry land area of Kediri Regency.

II. RESEARCH METHODS

The study was conducted in Kepung Subdistrict, Kediri Regency with the consideration of the wide area, the number of farmers who keep the beef cattle in a rowdy pattern, and is one of the areas that are the regional development priorities of the Kediri Regency government. The Sampling method used was a survey method. In this survey researchers did not have a complete list of all the names of farmers in Kepung District as a sampling frame. Therefore the sampling frame used in this study is a two-level cluster sampling. This study uses a questionnaire as a research instrument. In this research questionnaire uses a Likert scale in the form of a measure stating the category and ranking as well as the measured construct distance. In this study using a combined approach between quantitative analysis (mainstream) and qualitative analysis (non-mainstream). Data were analyzed using Structural Equation Modeling (SEM) based on warppls version 5.0 with the *Matlab* (Matrix Laboratory) compiler.

III. RESEARCH RESULTH

The results of the research analysis obtained where the analysis used using Structural Equation Modeling (SEM) with Warppls. As the description of the Results of Analysis of the Measurement and Structural Model of the Research with WarpPLS is shown in Figure 1 below :

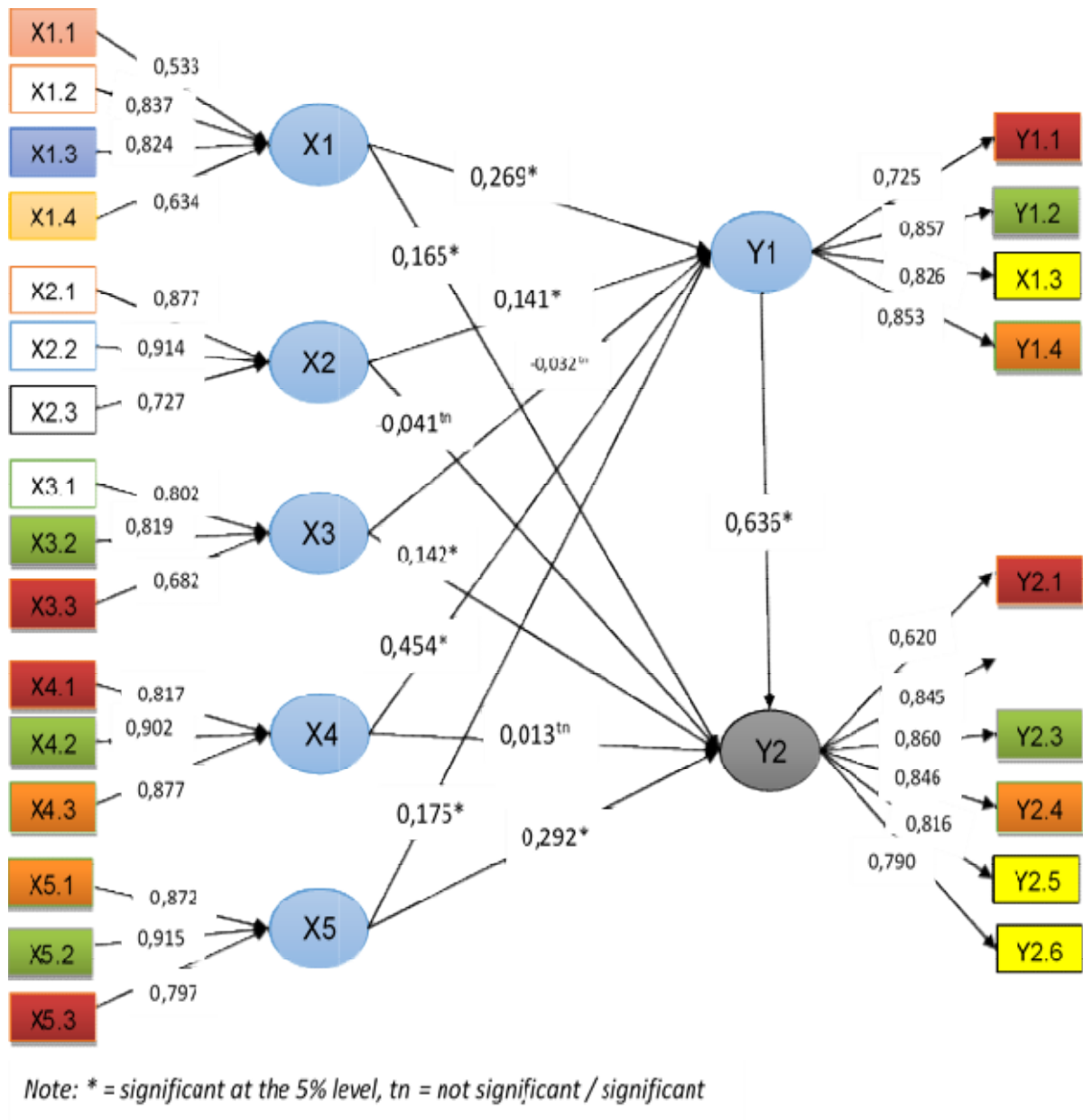


Figure 1. Results of Analysis of Measurement and Structural Models of Research with Warppls
Details:

(X1) = Variable in Human Capital

(X1.1) = Education Indicator

(X1.2) = Skill Indicator

(X1.3) = Training Indicator

(X1.4) = Experience Indicator

(Y1) = Empowerment Ability Variable

(Y1.1) = Awareness & Changing Desires

(Y1.2) = Ability to Increase Capacity

(Y1.3) = Ability to Face Obstacles

(Y1.4) = Solidarity Group Capability

(X2) = Variable of Social Capital

(X2.1) = Indicator of Trust

(X2.2) = Norm Indicator

(X2.3) = Network Indicator

(Y2) = Variable Independence of farmers

(Y2.1) = Welfare Indicator

(Y2.2) = Access Indicator

(Y2.3) = Indicator of Participation

(Y2.4) = Indicator of Courage to Take Risk

(X3) = Variable of Natural Resource Capital

(X3.1) = Availability Indicator

(X3.2) = Access Indicator

(X3.3) = Integration Indicator

(Y2.5) = Indicator of Critical Awareness of the Problem

(Y2.6) = Indicator of Decision Ability

(X4) = Variable Motivation Capital

(X4.1) = Social Indicator

(X4.2) = Entrepreneurship Social Indicator

(X4.3) = Entrepreneurship indicator

(X5) = Variable of Artificial Capital

(X5.1) = Physical Indicators

(X5.2) = Program / Funding Indicator

(X5.3) = Institutional Indicators

Validity and reliability testing is done from each indicator as an evaluation of the research measurement model to form research variables. thus ensuring that the measurement scores on latent variables are suitable for use in the analysis of structural models. The evaluation of the measurement models of each variable are as follows: human capital variable, social capital variable, Natural Resources capital variable, motivational capital variable, artificial capital variable, empowerment actor variable

Human capital, Seeing from the highest estimated weight value, the indicators of human capital are: skills (0.400), training (0.366),

experience (0.307) and education (0.256). The order of estimated weight values illustrates the important level of each indicator of human capital. In this study respondents perceive skills in sequence related to items (sub-indicators); skills about cultivation (82%), followed by skills about trade (78%), have skills about beef cattle breeding (76%), knowledge about cultivation (73%), and knowledge about trade (73%). The results of this study are in line with the study of Bowles, et al. (2001), who states that "the increase of individual capacity to achieve success in the labor market, especially for those who have low incomes, determined by human resource factors (HR) which called the capacity to contribute in the context of production which is

then generally referred as skills". Furthermore, according to Rohaeni, E (2014), technological mastery resources are the most dominant factor that affect the dynamics of cattle agribusiness sustainability. The intervention to improve accessibility of Human capital plays a role in changing community resources to achieve the success of the empowerment process. Human capital is characterized by an adequate level of education that is obtained from the support of the development of educational facilities and infrastructure, so that it can develop its empowerment and will have a significant impact on the independence of farmers.

Social capital, Seeing from the estimated weight value, the highest indicator of social capital is the norm (0.42), followed by trust (0.41), and network (0.34). The number of estimated weight reflects the level of importance of each indicator of social capital. In this study respondents perceive norms in sequence related to items (sub-indicators), values or culture of the local area supporting the empowerment program (84%), the importance of values / norms as a binder for joint / group business (82%), related officials give examples or examples that are oriented towards empowering (65%), community members / groups will obey the rules that have been mutually agreed (64%), the rules that have been mutually agreed will not cause problems (60%), there has never been a violation of village regulations committed by residents (55%). According to Widjajanti K (2011), in a value empowerment program that has been understood together by the community can strengthen positive social / work networks, by establishing mutually beneficial cooperation, will foster high awareness and solidarity and encourage the level of trust between people in order to achieve common goals. Social capital that is formed based on economic and social activities is seen as a factor that can enhance economic development and if used properly can strengthen construction effectiveness.

Natural resources capital, seeing from the estimated weight value, the highest indicator of

capital Natural resources is Natural resources Access (0.460); followed by the capacity / availability of natural resources (0.451), and integration of natural resources (0.384). The order of estimated weight values illustrates the important level of each indicator of Natural resources capital. In this study respondents perceive Access to Natural Resources in sequence related to items (sub-indicators); ease for me and my family in utilizing existing natural resources (77%), ease in establishing relationships or involvement with fellow business groups or other social organizations (74%), for me to access natural resources both in villages / regions and outside (66%), respondents felt that it was easy to obtain, education, work skills according to the field of work (64%), ease of obtaining work, especially related to the fields of cultivation, processing and trade (61%). The results of this study are in line with the study of Crowe (2008), which states that "easy access to natural resources is an advantage for the community to improve welfare". Furthermore Ali (2010), said that "reduced stock (capacity and integration) of natural resources will affect industrial productivity and can increase unemployment". Successful management of natural resources is usually related to community involvement (access) in collective actions (Oded G, 2011). Successful management of natural resources and variations in the distribution of land ownership and other natural resources contribute to the formation of economic composition and development patterns.

Motivational capital, If seen from the estimated weight value, the highest indicator of motivational capital is social entrepreneur (0.40), followed by entrepreneur (0.390), social motivation (0.363). The order of estimated weight values illustrates the important level of each indicator of motivational capital. In this study respondents perceive social entrepreneurs in sequence related to items (sub-indicators); recognize problems in people's lives (94%), solve problems by changing the system (84%), solve problems by discussing solutions together (84%), conduct activities to reduce unemployment (83%), utilize existing

resources to achieve productivity community (80%), help increase community income / overcome poverty (77%), work for economic growth and equitable distribution of community income (77%). The results of this study are in line with the study of Martin and Osberg (2007), which states that social entrepreneurs are activities that target a person or group who are marginalized and do not have economic access to be given business stimuli that are able to change the surrounding social conditions ". An independent social economic model must be designed by empowers (government and NGOs) by emphasizing behavioral, social and cultural factors. Rohaeni, E (2014), showed that farmers' resources consisting of financial, technological, economic, physical, social (resource) and vulnerability (seasonal and security vulnerability) simultaneously affect the level of farmer group dynamics.

Artificial capital, If seeing from the highest estimated weight value, the indicator of artificial capital is program / funding (0.40), followed by institutional (0.39), physical indicator (0.363). The order of estimated weight values illustrates the important level of each indicator of artificial capital. In this study respondents perceive program / funding indicators in sequence related to items (sub-indicators); in addition to being sourced from the government, the community also allocates funds independently (85%), funding for farmers empowerment programs increases annually (68%), the amount of funding from the government is very adequate to implement empowerment programs (61%), empowerment program funding falls on time and sustainable (58%), with empowerment program funding allocated regularly and sourced from the government (47%). The results of this study are in line with Smit's study (2011), which stated that "government and NGO programs must be considered into various group characteristics when programs are designed". Furthermore According to Obaji and Olugu (2014), "business success in an area is very dependent on policies issued by the government". Especially for developing countries, supportive policies are needed that are able to stimulate economic

development such as infrastructure, financial and fiscal. It is said Prastawa, Heru., Fanani, Zainal., Suliantoro, Hery (2010), before the formulation of regional development strategies must be analyzed of important factors that influence the development potential. Among these important factors are the networks involved and the partnership system, human resources and the division of roles, innovation and development, infrastructure, facilities, and policy regulation.

The ability of empowerment perpetrators,

If seeing from the loading factor, the highest indicator of the ability of the perpetrators is the ability to increase capacity (0.857); followed by group skills (0.853); ability to deal with obstacles (0.826); and awareness and desire to change (0.725). The order of loading of these factors reflects the importance of each indicator of the ability of the empowerment actors. In this study respondents perceive the ability to increase capacity in sequence related to items (sub-indicators); often attend training or the like to improve abilities (94%), be adaptive to changes and developments around those for improvement (93%), receive and share information related to knowledge and practice to improve theory and practice for capacity development (86%), have high enthusiasm for creativity / initiative and encouraging group development and the environment (84%), and discussing and practicing the skills of the training results (78%). The results of this study are in line with the study of Craig and Mayo (1995) in Ibrahim and Alkire (2007), which states that empowerment, is about community collectively, where networks and alliances can be connected vertically to enable lobbying for marginal groups. Sumodiningrat (1999), that the involvement of the facilitator as an agent of empowerment in overseeing the empowerment process is an important source as a pathway to achieve community empowerment. Empowerment actors are not only required to enrich the appropriate skills, training, experience and education but also to the ability to continue to improve the capacity of designing an empowerment program, and the ability to associate in a foster

group is an important condition for the success of farmers' independence.

Farmer's independence, it seen from the loading value, the highest order indicator for farmers' independence is participation indicator (0.860); courage to take risks (0.846); access (0.845); critical awareness of the problem (0.816); ability in decision making (0.790); and welfare (.620). The order of loading factors reflects the importance of each indicator of farmer independence. In this study respondents perceive participation in sequence related to items (sub-indicators); with the management of Human Resources or workers (83%), followed by participation in the use of equipment and technology (74%), involvement in planning in organizations (74%), obtaining non-formal education (73%) and finally participation in terms of interaction with outside communities (67%). These results can explain that participation can be fostered by direct community involvement in human resource management or involvement in work, use of technology or equipment, furthermore in organizational planning, and engagement in non-formal education and interaction with outside communities. This is according to Noor (2011), studying the challenges and advantages of community participation as an approach to sustainable urban development in Egypt. Community participation and development has been identified as a key concept in development with an emphasis on "direct involvement of local people in local affairs (Midgley, 1986). Communities in joint business groups in the area of beef cattle business place access as an important part in the independence of farmers including access to interactions with outside communities, human resource management, planning in organizations, use of technology / equipment and access to training / non-formal education. According to Anantanyu (2004), lack of accessibility in the countryside is one of the causes of poverty among rural communities. The results of this study are slightly different from the concept of the longwe

empowerment indicator hierarchy, which places them in sequence from the most important (above), namely control, awareness, participation, access and welfare. Where the results of research on community empowerment of beef cattle breeders in dry land in Kediri district resulted in the concept of a farmer's independence hierarchy where participation ranks highest, followed by courage to take risks, access, have a critical awareness of the problem (awareness) and ability to make decisions and the lowest is welfare. .

Farmers' independence Model

Based on the descriptions that have been described regarding the factors that influence and determine the independence of breeders, it can be formulated two types of empowerment models for beef cattle business farmers in dry land in Kediri Regency as follows;

Model 1. Independent Empowerment Model of Beef Cattle Farmers

with the following equation;

$$Y2 = 0.636 Y1 + 0.287 X5 + 0.167 X1 + 0.132 X3 \dots (1)$$

$$Y1 = 0.273 X1 + 0.182 X5 \dots (2)$$

Model 1 shows that to increase the independence of farmers (Y2) directly can be sought through increasing the ability of empowerment actors (Y1), human capital (X1), artificial capital (X5) and natural resource capital (X3). Based on the coefficient of the existing variables, the ability of empowerment actors is the variable that has the most influence compared to other variables. This means that the focus on increasing the independence of farmers must be directed more by increasing the ability of empowerment actors. As for enhancing the ability of the perpetrators of empowerment directly, it can also be done by increasing human capital (X1) and

artificial capital (X5), which from equation (2) human capital has a greater role in supporting the capabilities of the empowerment actors. Thus, this model states that in order to increase the independence of farmers (Y2), efforts should be prioritized to develop the capabilities of empowerment actors (Y1) and human capital (X1) and artificial capital (X5), where the last two variables have a dual role both for improve the independence of farmers and the ability of empowerment actors. As for the variable natural resource capital (X3), although the effect is not so great, it still has a stake in determining the independence of farmers and does not need to be mediated with the ability of empowerment actors.

Model 2 Capability Empowerment Model of the Empowerment Performer

with the following equation;

$$Y1 = 0,273 X1 + 0,155 X2 + 0,453 X4 + 0,182 X5 \dots\dots (3)$$

Model 2 shows a focus on increasing the ability of empowerment actors. Different from model 1, Model 2 shows that in order to truly be able to develop the capabilities of empowering actors, it is not enough just to increase human capital (X1) and artificial capital (X5), but also social capital (X2) and motivational capital (X4). From the four variables, motivational capital has the greatest influence in developing the ability of empowerment performances because it has the greatest coefficient in equation (3). Farmer independence can be achieved indirectly, through mediation by the ability variable of the empowerment actors (the greatest total influence), with a focus on improving the ability of the empowerment actors through motivational capital (X4), human capital (X1), artificial capital (X5), and social capital (X2).

Briefly, the structural model of the independence of farmers in the area of beef cattle business (*KaPeT*) in Kediri can be seen in Figure 2 below:

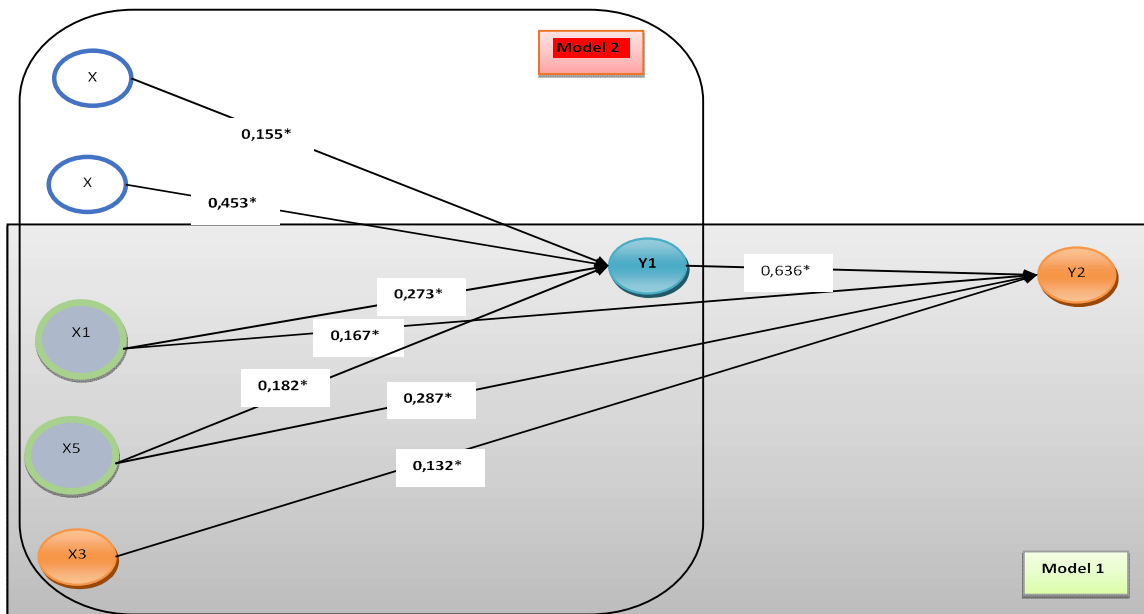


Figure 2. Structural model of research results.

Note: * = significant at the 5% level, tn = not significant; X1 = Human Capital Variable; X2 = Social Capital Variable; X3 = Variable of Natural Resource Capital; X4 = Variable Motivation Capital; X5 = Artificial Capital Variable; Y1 = Capability Empowerment Variable; Y2 = Farmer Independence Variable

IV. CONCLUSIONS

Conclusions based on the research result answering the research problem formulation are as follows:

The construction of the sustainable empowerment model for beef cattle breeders on dry land in Kediri Regency can be formulated in a model as follows:

Model 1. Independent Empowerment Model of beef cattle breeders on dry land as follows;

Model 1 shows that to directly increase the independence of farmers (Y2) can be sought through increasing the ability of empowerment actors (Y1), human capital (X1), artificial capital (X5) and natural resource capital (X3). Based on the coefficient of the existing variables, the ability variable of the empowerment performers has the most influence compared to other variables. The natural capital variable (X3), although the effect is not so great, but still has a role in determining the independence of farmers and does not need to be mediated with the ability of empowerment actors.

Model 2. Capability Empowerment Model of Empowerment Performers with the following equation;

Model 2 shows a focus on increasing the ability of empowerment actors, so it is not enough just to increase human capital (X1) and artificial capital (X5), but also social capital (X2) and motivational capital (X4). The independence of farmers can be achieved indirectly, through mediation by the variable ability of the Empowerment performer (the greatest total influence), with a focus on improving the ability of the empowerment actors. Through motivation (X4) human capital (X1), artificial capital (X5), and social capital (X2).

Some suggested research results are as follows:

- a) In the sustainable empowerment model, integrated beef cattle breeders need to get attention to see the factors that have a significant and positive effect on the independence of farmers.

- b) Considering that the variable of empowerment is the main mediator in the realization of the farmers' independence, both from human capital, social capital, motivational capital, and artificial capital, it is recommended for further research on the role of empowerment performers (the greatest total influence) of government employee, groups the community, and the private sector in making empowerment models to achieve the success farmers' independence.
- c) Specifically for the natural resource variable, it does not significantly influence the empowerment actors, but it does have a significant effect on the independence of the community. Therefore, further research is recommended to find out (the greatest total effect) on the availability, access and integration of natural resources in independent beef cattle breeders in dry land.

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